

## **Patent Claims**

1. An adjustable pinhole for a laser scanning microscope, the adjustable pinhole comprising: first and second silicon apertures movable relative to each other, each of said silicon apertures having a rectangular mirror-inverted opening, the relative movement of the apertures defining a pinhole of varying size.
2. The adjustable pinhole according to claim 1, whereby the first and second silicon apertures are displaceable with respect to one another in a first direction.
3. The adjustable pinhole according to claim 2, whereby at least one of said silicon apertures is displaceable in a second direction perpendicular to the first direction for adjustment to obtain an exact square form for the configuration of the pinhole.
4. The adjustable pinhole according to claim 3, whereby the apertures are fastened on flexible solid joints, which are arranged in a rigid manner in the first direction and are flexible in the second direction.
5. A method for adjustment of a pinhole in a laser scanning microscope having a photo-receiver, the method comprising the steps of:
  - forming a square-shaped pinhole from first and second silicon apertures, each one with a rectangular mirror-inverted opening;
  - passing light through the pinhole; and
  - moving the apertures to maximize the light received by the photo-receiver.